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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
VAN DOREN, BETH	
ART UNIT	**PAPER NUMBER**
3623	

DATE MAILED: 11/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/905,174	DVORAK ET AL.	
	Examiner	Art Unit	
	Beth Van Doren	3623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 September 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *13 July 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. The following non-final office action is in response to communications received 09/25/05. Claims 1-26 (Group I) have been elected without traverse and claims 27-56 (Groups II-V) have been withdrawn in response to the restriction requirement of 09/01/2005. Claims 1-26 are now pending and addressed below.

Election/Restrictions

2. Claims 27-56 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to nonelected inventions. Election was made **without** traverse in the reply filed on 09/25/05.

3. Applicant's remarks concerning the potential filing of a divisional application have been acknowledged. However, these remarks concerning Groups II-V will be evaluated after the Applicant files this divisional.

Specification

4. Applicant is reminded of the proper content and format for an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

5. The abstract of the disclosure is objected to because it is too brief and general and does not include that which is new in the art to which the invention pertains. Correction is required. See MPEP § 608.01(b).

Drawings

6. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Examiner points out that the drawings present charts with data by date in the rows of actual sales, cannibalization adjustments, projected sales, cannibalization date, and cannibalization factor, and do not mention old and new items at locations, calendaring disruptive events, scaling sales history based on anticipated sales of a new item, any computer-implemented method, as disclosed in the claims, etc. Therefore, these features must be shown or be canceled from the claims. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will

be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 7, 8, 19-22, and 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. Claim 7 recites "wherein calendaring involves assigning a particular disruptive event and its associated impact estimate to a particular date". This language is indefinite as it is not specifically clear as to what the term "its" refers. For examination purposes, this limitation has been construed as --wherein calendaring involves assigning a particular disruptive event and the disruptive event's associated impact estimate to a particular date--. Correction is required.

9. Claim 8 also recites the term "its" in the limitation "wherein calendaring involves assigning a particular disruptive event and its associated impact estimate to a particular date and time". This language is indefinite as it is not specifically clear as to what the term "its" refers. For examination purposes, this limitation has been construed as -- wherein calendaring involves assigning a particular disruptive event and the disruptive event's associated impact estimate to a particular date and time--. Correction is required.

10. Claims 19-22 each recite "the projected demand estimates". There is insufficient antecedent basis for this limitation in the claims. Based on the language of claim 1, this

limitation has been construed as --the projected demand-- for examination purposes. Clarification is required.

11. Claim 23 recites "the estimated impact". There is insufficient antecedent basis for this limitation in the claims. Based on the language of claim 1, this limitation has been construed as --the impact estimates-- for examination purposes. Claim 23 further recites "the actual impact", which also has insufficient antecedent basis in the claims. For examination purposes, this limitation has been construed as --an actual impact--. Clarification is required.

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-15, 18-21, and 23-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Fields et al. (U.S. 5,459,656).

13. As per claim 1, Fields et al. teaches a computer-implemented method of adjusting projected demand for one or more items at one or more locations, including:

calendaring one or more disruptive events with associated impact estimates to apply to the items at the locations (See figure 2A, column 3, lines 4-10, column 4, lines 5-20 and 30-42, and column 8, lines 11-20, wherein a disruptive event, such as a holiday, a sale, etc., is calendared using impact estimates. See also column 10, lines 10-15, which talk about location specific values in the calendaring); and

applying the impact estimates (See column 2, lines 5-20, column 5, lines 1-7, and column 8, lines 1-20, wherein the impact estimates are applied to project demand or update historical demand data), wherein

the impact estimates for disruptive events that already have taken place are applied to sales history quantities used to project demand (See column 4, lines 60-67, column 8, lines 1-5, column 9, lines 1-15, and column 10, lines 50-67, wherein the impact factors for the recent past are used to update the sales history quantities), and

the impact estimates for disruptive events that have not yet take place are applied to adjust the projected demand (See column 3, lines 54-66, column 4, lines 30-42, column 5, lines 1-7, and column 8, lines 10-30, wherein the impact factors for an event, such as a holiday, are used to adjust demand from normally occurring days (i.e. the difference between a normal Sunday and a promotional Sunday)).

14. As per claim 2, Fields et al. discloses wherein the impact estimates can be positive or negative (See column 6, lines 23-35 and column 11, lines 1-25, wherein the impact factors will increase or decrease the projections).

15. As per claim 3, Fields et al. teaches wherein the impact estimates are factors multiplied by the sales history quantities or the projected demand (See column 6, lines 15-32, column 7, lines 2-20, column 11, lines 1-25, and column 12, table 1, wherein the impact estimates are multiplied).

16. As per claim 4, Fields et al. discloses wherein the impact estimates are quantities added to the sales history quantities or the projected demand (See column 4, lines 1-14, column 6, lines

20-35, column 8, lines 20-32, wherein the impact estimates are quantities that are added to the historic sales date, such as adding ten percent to the sales history for the day after thanksgiving).

17. As per claim 5, Fields et al. teaches wherein the impact estimates for disruptive events that already have taken place are factors multiplied by the sales history quantities (See column 4, lines 1-5, column 7, lines 1-25, column 8, lines 20-32, column 11, lines 1-25, wherein impact estimates (percentages) are multiplied by the sales history quantities stored in the system).

18. As per claim 6, Fields et al. teaches wherein the impact estimates for disruptive events that already have taken place are quantities added to the sales history quantities (See column 4, lines 60-67, column 8, lines 1-5, column 9, lines 1-15, and column 10, lines 50-67, wherein the impact factors, interpreted through the recent actual demand, are combined with the sales history data stored in the database).

19. As per claim 7, Fields et al. discloses wherein calendaring involves assigning a particular disruptive event and the disruptive event's associated impact estimate to a particular date (See figure 2A, column 4, lines 5-20, and column 8, lines 11-20, wherein a disruptive event, such as a holiday, a sale, etc., is calendared to a specific date along with associated impact estimates).

20. As per claim 8, Fields et al. discloses wherein calendaring involves assigning a particular disruptive event and the disruptive event's associated impact estimate to a particular date and time (See column 3, lines 60-67, column 4, lines 5-20 and 50-60, and column 8, lines 11-20, column 10, lines 15-30, which discloses the date and time of a disruptive event through the use of time intervals).

21. As per claim 9, Fields et al. teaches a plurality of disruptive events (See figure 2A, column 3, lines 4-10, column 4, lines 5-20 and 30-42, wherein a plurality of disruptive events are

known in the system, such as a holiday, a sale, etc. Also, see column 3, line 60-column 4, line 15, wherein the disruptive event is broken up into time intervals per day, and therefore a plurality of disruptive events occur per day).

22. As per claim 10, Fields et al. teaches wherein one or more of the plurality of disruptive events have not yet taken place (See figure 2A, column 3, lines 54-66, column 4, lines 30-42, column 5, lines 1-7, and column 8, lines 10-30, wherein the disruptive event(s) have not yet taken place).

23. As per claim 11, Fields et al. teaches wherein one or more of the plurality of disruptive events have already taken place (See column 4, lines 60-67, column 8, lines 1-5, column 9, lines 1-15, and column 10, lines 50-67, which discusses data of the recent past for a disruptive event, such as a holiday or promotion).

24. As per claim 12, Fields et al. teaches wherein one or more of the plurality of disruptive events have not yet taken place and one or more of the plurality of disruptive events have already taken place (See figure 2A, abstract, column 3, line 60-column 4, line 15, wherein the disruptive event, such as a holiday, is broken up into time intervals per day. Therefore, the disruptive event at morning interval A will have already occurred and the disruptive event at afternoon interval B will not have already occurred).

25. As per claim 13, Fields et al. teaches wherein a plurality of impact estimates for the plurality of disruptive events are combined multiplicatively (See column 3, lines 60-67, column 7, lines 2-20, column 8, lines 10-30, and column 10, lines 15-30, wherein the plurality of impact estimates for the time intervals are scaled using multiplication. Also, the entire day projection would be multiplied by a percentage, such as ten percent).

26. As per claim 14, Fields et al. teaches wherein a plurality of impact estimates for the plurality of disruptive events are combined additively (See column 3, lines 60-67, and column 10, lines 15-30, wherein the plurality of impact estimates for the time intervals of the disruptive event are added together to show projections for the entire day).

27. As per claim 15, Fields et al. teaches wherein a plurality of impact estimates for the plurality of disruptive events are combined by a combination of addition and multiplication (See column 3, lines 60-67, column 7, lines 2-20, column 8, lines 10-30, and column 10, lines 15-30, wherein the plurality of impact estimates for the time intervals of the disruptive event are added together to show projections for the entire day. Also, the entire day projection would be multiplied by a percentage, such as ten percent. Multiplication is also used on each of the intervals values).

28. As per claim 18, Fields et al. teaches applying a plurality of forecasting techniques to the sales history quantities to derive a plurality of projected demand estimates (See column 6, lines 4-22 and 34-47, column 7, lines 30-48, column 10, lines 1-15, wherein a plurality of techniques as authored by the user would be applied to the sales history to derive a plurality of demand estimates).

29. As per claim 19, Fields et al. teaches applying a probabilistic forecast technique to the sales history quantities to derive the projected demand (See column 3, line 60-column 4, line 20, column 7, lines 2-25, column 8, lines 10-30 and line 55-column 9, line 15, wherein projections of probable demand are calculated using past sales history)

30. As per claim 20, Fields et al. teaches applying a segmented probabilistic forecast technique to the sales history quantities to derive the projected demand (See column 3, line 60-

column 4, line 20, column 7, lines 2-25, column 8, lines 10-30 and line 55-column 9, line 15, wherein projections of probable demand are calculated using past sales history. The days are divided into segmented intervals, wherein each interval has a projection)

31. As per claim 23, Fields et al. teaches evaluating an actual impact of at least one particular disruptive event that has already taken place at least a predetermined period prior to adjustment of the projected demand, and adjusting the impact estimates based on the evaluated actual impact of the disruptive event (See column 4, lines 60-67, column 8, lines 1-5, column 9, lines 1-15, and column 10, lines 50-67, wherein the actual impact factors for the recent past are used to update the sales history quantities).

32. As per claim 24, Fields et al. teaches wherein the predetermined period is user selected (See column 4, lines 60-67, column 5, lines 1-6, 14-25, and 59-67, and column 6, lines 5-22, wherein the user authors the files, the files specifying the predetermined interval for updating the projected demand).

33. As per claim 25, Fields et al. teaches wherein the predetermined period is measured in days (See column 4, lines 60-67, column 5, lines 1-6, 14-25 and 59-67, and column 6, lines 5-22, wherein the predetermined period is weeks or days).

34. As per claim 26, Fields et al. teaches wherein the predetermined period is measured in time increment of less than a day (See column 4, lines 60-67, column 5, lines 1-6, 14-25 and 59-67, and column 6, lines 5-22, wherein the predetermined period is an interval of a day).

Claim Rejections - 35 USC § 103

35. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

36. Claims 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fields et al. (U.S. 5,459,656).

37. As per claims 16 and 17, Fields et al. teaches wherein a plurality of impact estimates for the plurality of disruptive events are applied (See figure 2A, column 3, lines 4-10, column 4, lines 5-20 and 30-42, wherein a plurality of disruptive events are known in the system, such as a holiday, a sale, etc. Also, see column 3, line 60-column 4, line 15, wherein the disruptive event is broken up into time intervals per day, and therefore a plurality of disruptive events occur per day).

However, Fields et al. does not expressly disclose the order that the impact estimates are applied, such as beginning with a most recent disruptive event or beginning with a most distant disruptive event.

Fields et al. discloses a system wherein disruptive events (holidays, sales, etc.) have impact estimates that are used to project sales for a given day. The system is able to store information concerning a plurality disruptive events by day and the system can also break a disruptive event into a plurality of intervals, each interval also reflecting a disruptive event. The user of the system defines how the user wants the impact estimates applied, such as starting on a certain date, at a specified interval, or at near future intervals. See column 5, lines 1-5 and 59-67, column 8, lines 10-32. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to apply the impact estimates in any order specified by the user in order to make more appropriate and accurate projections by allowing the user to "author" what

specifically the user needs projected. See column 2, lines 15-20, column 5, lines 14-25, of Fields et al.

38. Claims 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fields et al. (U.S. 5,459,656) in view of Crosswhite (U.S. 6,611,726).

39. As per claim 21, Fields et al. applying forecasting techniques to the sales history quantities to derive the projected demand for businesses items (See column 3, line 60-column 4, line 20, column 7, lines 2-25, column 8, lines 10-30 and line 55-column 9, line 15, wherein projections of demand are calculated using past sales history). However, Fields et al. does not expressly disclose applying a regression forecast technique to the sales history quantities.

Crosswhite discloses applying a regression forecast technique to the sales history quantities to predict future product demand from historical demand data (See column 3, lines 39-67, which discusses regression techniques).

Both Fields et al. and Crosswhite disclose forecasting demand applying forecasting techniques to historical demand data. It would have been obvious to one of ordinary skill in the art at the time of the invention to use regression techniques to project demand in order to more accurately forecast product demand from historical demand data by utilizing a time-series forecasting method that uses data collected at evenly spaced intervals, such as the intervals (periods in a day, days, weeks) of Fields et al. See column 3, lines 39-55, and column 4, lines 9-15, of Crosswhite that discusses the technique and benefits of regression time series forecasting.

40. As per claim 22, Fields et al. applying forecasting techniques to the sales history quantities to derive the projected demand (See column 3, line 60-column 4, line 20, column 7,

lines 2-25, column 8, lines 10-30 and line 55-column 9, line 15, wherein projections of demand are calculated using past sales history). However, Fields et al. does not expressly disclose applying an ARIMA forecast technique to the sales history quantities.

Crosswhite discloses using Autoregressive Integrated Moving Average (ARIMA) methods to predict future product demand from historical demand data (See column 3, lines 39-60, which discusses ARIMA).

Both Fields et al. and Crosswhite disclose forecasting demand applying forecasting techniques to historical demand data. It would have been obvious to one of ordinary skill in the art at the time of the invention to use ARIMA to project demand in order to more accurately forecast product demand from historical demand data by utilizing a time-series forecasting method that uses data collected at evenly spaced intervals, such as the intervals (periods in a day, days, weeks) of Fields et al. See column 3, lines 39-55, and column 4, lines 9-15, of Crosswhite that discusses the technique and benefits of ARIMA time series forecasting.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Fang et al. (U.S. 6,928,398) discloses building a time series model including ARIMA modeling.

Tone et al. (U.S. 5,596,493) teaches predicting sale volume for planning purpose using different mathematical techniques.

Fox et al. (U.S. 5,521,813) teaches considering the impact of the disruptive event of weather in managerial planning.

Landvater (U.S. 6,609,101) discloses forecasting demand for products and considering disruptive events like promotions.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Beth Van Doren whose telephone number is (571) 272-6737. The examiner can normally be reached on M-F, 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on (571) 272-6729. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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